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## 1. Field of the Invention

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points. Thus, today, point service is one of very effective sales strategies.

As well as actual stores, this point service is increasingly employed by virtual stores, i.e., so-called  
5 online shops, which become one of important sales forms as Internet grows.

#### Summary of the Invention

In many cases, either in an actual store or in an online  
10 shop, points given to a customer are proportional to a purchase amount. For example, points corresponding to 3 % of a purchase amount is given. Usually, this rate is uniformly applied to all the commodities. Many points are given to a purchase of a commodity of a high price, and thus it is  
15 possible to excite the will to purchase.

On the other hand, from the viewpoint of a store, there exist commodities of which the store especially wishes to increase their sales numbers, for the sake of a sales strategy. For example, a new product that a store wishes to make known  
20 widely, a commodity left in stock sufficiently, an unpopular commodity, a commodity of a short life cycle, and the like may be mentioned. Sometimes, a store may wish to increase a sales number of a specific commodity for a service campaign to customers.

25 Further, a store may wish to secure a certain degree of sales number of a commodity, in a stage of its reservation before the commodity is put on sale.

The present invention has been made considering such

situations, and an object of the invention is to excite customers' will to purchase a specific commodity within a specific period.

To attain the above objects, the present invention provides an order receiving apparatus that receives an order of commodity transaction from a commodity ordering apparatus through a network, comprising: a first storage means for storing commodity information that includes at least a commodity and a selling price of a commodity as an object of transaction; a second storage means for storing periods applied respectively to specific commodities, and for storing specific parameters concerning economic return, which are applied to said specific commodities when said periods include dates related to orders of said commodities respectively, relating said periods and said specific parameters to said commodities, respectively; a third storage means for storing a general-purpose parameter concerning economic return, which is applied to commodities other than said specific commodities and to said specific commodities for which said periods do not include dates related to orders of said specific commodities respectively; and a means for performing steps of: receiving a request for displaying information on commodities, from said commodity ordering apparatus; referring to the first storage means, to output said commodity information to said commodity ordering apparatus; and referring to the second and third storage means, to output information on said specific commodities, said periods applied to said commodities, and

specific parameters, and information on said general-purpose parameter, to said commodity ordering apparatus.

Here, said general-purpose parameter is a value defining a rate to a selling price of a commodity; and said  
5 second points may be decided by multiplying the selling prices of the commodities in question by said rate.

Further, said specific parameter are values defining rates to the selling prices of said specific commodities related to a certain combination of commodities,  
10 respectively; and said first points may be decided by multiplying the selling prices of the commodities in question by said rates, respectively.

#### Brief Description of the Drawings

15 Fig. 1 is a block diagram for explaining an outline of a network sales system according to the present invention;

Fig. 2 is a block diagram for explaining an outline of a customer apparatus;

20 Fig. 3 is a block diagram for explaining an outline of a store apparatus;

Fig. 4 is a diagram explaining data structure of a commodity database;

Fig. 5 is a diagram explaining data structure of a customer database;

25 Fig. 6 is a diagram explaining contents of a point setting file;

Fig. 7 is a block diagram showing point setting receiving processing in a store apparatus;

Fig. 8 is a view showing an example of a giving points setting screen;

Fig. 9 is a view showing another example of a specific point rate setting screen;

5 Fig. 10 is a flowchart explaining processing in which a store apparatus accepts access of a customer apparatus, and provides an online shop;

Fig. 11 is a view showing an example of an authentication screen;

10 Fig. 12 is a diagram explaining transition of Web pages presented by a WWW server;

Fig. 13 is a view showing an example of a commodity list screen; and

15 Fig. 14 is a view showing an example of a purchase procedure screen.

#### Detailed Description

Now, embodiments of the present invention will be described in detail, referring to the drawings.

20 Fig. 1 is a diagram for explaining an outline of a network sales system according to the present invention. As shown in the figure, this embodiment is an example that the present invention is applied to a network sales system comprising a customer apparatus 1 and a store apparatus 2, 25 those apparatuses being connected with each other through Internet 3. Of course, the present invention is not limited to such a configuration. For example, a plurality of customer apparatuses 1 and a plurality of store apparatuses

may exist.

A store of a user of the store apparatus 2 sets up an online shop on Internet 3. An object of transaction in this online shop may be a commodity produced by the store, or may be a commodity made by another. Here, "commodity" may mean service.

A customer, i.e., a user of the customer apparatus 1 can access the online shop to order a desired commodity. To facilitate processing at that time, the store apparatus 2 may obligate the customer to register delivery address information, settlement information, and the like in advance of doing the online shopping. When the store receives the order in the store apparatus 2, the store follows the procedure for delivery to the customer. Here, the "order" includes an advance order.

In this online shop, in order to excite customer's incentive to purchase, points corresponding to an amount of purchase is given to a customer, when an order is received from the customer. Those points can be used within the online shop for receiving a discount corresponding to used points at the conversion rate of, for example, 1 yen to 1 point in the next purchase, or can be used for exchanging a prescribed number of points for a premium commodity.

In principle, the value of points given to a customer is obtained by multiplying an amount of purchase by a certain rate. However, with respect to a specific commodity, points to be given are calculated by applying a specific rate in a limited period. By such an arrangement, it is possible

to set a higher rate in a limited period, for a commodity on which increase of sales amount is desired, or a commodity on which securing of a certain number of reservations is desired. As a result, it is possible to excite customers' will to purchase a specific commodity in a specific period.

Fig. 2 is an outline block diagram showing the customer apparatus 1. The customer apparatus 1 functions as a commodity ordering apparatus, and, as shown in the figure, can be implemented by a computer of a general configuration, comprising a CPU 11, a main memory 12, an external storage 13 such as a hard disk drive, a reader 14 for reading data, a program, or the like from a portable storage medium 15 such as a CD-ROM, DVD-ROM, or the like, an input device 16 such as a keyboard, mouse, or the like, a display unit 17 such as a CRT display, a communication device 18 for communication with the store apparatus 2 through Internet 3, and an interface 19 in charge of data transmission and reception between the above-mentioned components.

The external storage 13 stores an OS (Operating System) 131 for generally controlling operations of the computer, a WWW browser program 132, and a communication program 133. Of course, other programs may be stored, if necessary.

The CPU 11 loads the WWW browser program 132 and the communication program 133 onto the main memory 12, to execute them. By this, a WWW browser 111 and a communication processing part 112 are realized on the computer.

The WWW browser 111 can browse data of the HTML format (for example, a Web page) opened to the public by the store

apparatus 2, utilizing HTTP (Hyper Text Transfer Protocol).

The communication processing part 112 controls the communication device 18, to process various protocols, for example, PPP, TCP/IP and the like, required for the WWW browser 111 to communicate with the store apparatus 2.

Fig. 3 is an outline block diagram showing the store apparatus 2. The store apparatus 2 functions as an order receiving apparatus, and, as shown in the figure, can be implemented by a computer of a general configuration, comprising a CPU 21, a main memory 22, an external storage 23 such as a hard disk drive, a reader 24 for reading data, a program, or the like from a portable storage medium 25 such as a CD-ROM, DVD-ROM, or the like, an input device 26 such as a keyboard, mouse, or the like, a display unit 27 such as a CRT display, a communication device 28 for communication with the customer apparatus 1 through Internet 3, and an interface 29 in charge of data transmission between the above-mentioned components.

The external storage 23 stores an OS (Operating System) 231 for generally controlling operations of the computer, a WWW server program 232, a communication program 233, a giving points management program 234, a commodity database 235, a customer database 236, a point setting file 237, and a Web generating data file 238. Of course, other programs may be stored, if necessary.

The CPU 21 loads the WWW server program 232, the communication program 233 and the giving points management program 234 onto the main memory 22, to execute them. By



this, a WWW server 211, a communication processing part 212 and a giving points management part 213 are realized on the computer.

5 The WWW server 211 opens data of the HTML format to the public, so that the WWW browser 111 of the customer apparatus 1 can browse it utilizing HTTP.

10 The communication processing part 212 controls the communication device 28, to process various protocols for the WWW server 211 to communicate with the customer apparatus 1.

The giving points management part 213 receives setting on points to be given to a customer in purchasing a commodity, and records it into the point setting file 237.

15 The commodity database 235 stores, for example as shown in Fig. 4, a commodity ID (i.e., a code for identifying a commodity) 2351, a commodity name 2352, a selling price 2353, a property 2354 of the commodity, for example classified into "household electric appliance", "game machine", and "software", and image data 2355 for generating an image of the commodity, relating these fields with one another.

20 The customer database 236 stores, for example as shown in Fig. 5, a customer ID 2361 for identifying a customer, a customer name 2362, an E-mail address 2363, a commodity delivery address 2364, information required for settling 2365 such as credit card information, the number of points 2366 obtained by the customer, and a purchase history 2367 recording a purchased commodity and its date of purchasing, relating these fields with one another.

The point setting file 237 is a file for storing information set in relation to giving of points, and stores, for example as shown in Fig. 6, a customer ID 2371, a point rate 2372, and a start date 2373 and expiration date 2374  
5 defining a period in which the mentioned point rate is applied, relating these fields with one another.

In the present embodiment, the first line 237a of the point setting file 237 stores a basic point rate, and specific point rates applied to specific commodities in limited  
10 periods are stored from the second line and downward 237b, 237c, .... The basic point rate and specific point rates will be further described below.

The Web page generating data file 238 stores a page file, template files, and the like for generating Web pages.  
15 The WWW server 211 generates Web pages referring to this file.

Next, operation of the network sales system having the above-described configuration will be described.

The network sales system performs processing in which  
20 the store apparatus receives setting of points to be given, and processing in which the store apparatus 2 receives access of the customer apparatus 1 and provides the online shop.

First, processing in the store apparatus 2 for receiving setting of points to be given will be described,  
25 referring to a block diagram in Fig. 7 showing point setting receiving processing.

As shown in Fig. 4, the commodity database 235 of the store apparatus 2 stores information (for example, selling

prices, image data, etc.) on commodities dealt by the store apparatus 2, in advance. Of course, the seller can freely add, delete, modify, and make other operations on the commodity data stored in the commodity database 235 (S101).

5 Such processing can be performed as a usual database operation.

In the present embodiment, it is assumed that points given to a customer is proportional to a purchase price of a commodity ordered. For example, assuming that points  
10 corresponding to 10 % of a purchase price are given to a customer, when a customer purchases a commodity of a selling price of 1,000 yen, then 100 points corresponding to 10 % of 1,000 yen is given to the customer. Of course, this rate can be freely set by the store, and, in principle, the set  
15 rate is uniformly applied to all commodities. Hereinafter, this rate is referred to as a basic point rate.

As an exception to application of the basic point rate, the store can set a point rate that is applied to a specific rate in a limited period. For example, it may be decided  
20 that, when an order (or an advance order) of a commodity A is received in a specific period, points corresponding to 15 % of an amount of purchase of the commodity A are given to the customer. This rate is referred to as a specific point rate.

25 A plurality of commodities may be set as specific commodities, to which different periods and different point rates are applied, respectively.

The store can use the giving points management part

213 to set the basic point rate (S102) and to set the specific point rates (S103). When the giving points management part 213 receives a request of execution from the store, the giving points management part 213 displays a giving points setting screen 400, for example as shown in Fig. 8, on the display unit 27.

As shown in the figure, the giving points setting screen has a basic point rate input area 401 for inputting a basic point rate, a specific point rate input area 402 for inputting specific point rates, and an OK button 403.

The specific point rate input area 402 has a commodity area 4021 for specifying specific commodities, a point area 4022 for inputting point rates, a start date input area 4023 for inputting start dates, and an expiration date input area 4024 for inputting expiration dates.

Previous to displaying this screen, the WWW server 211 refers to the point setting file 237 to obtain values of the already-set basic point rate etc., and displays those values in the basic point rate input area 401 and the specific point rate input area 402 so that the already determined values can be confirmed on this screen 400.

The store uses the input device 26 to input a value into the basic point rate input area 401, or to modify the value in that area.

Further, in the specific point rate input area 402, commodities, specific point rates, start dates, and expiration dates can be inputted or modified. Or, already-inputted commodities, specific point rates, start

dates and expiration dates can be deleted.

In the present embodiment, in the specific point rate input area 402, a specific point rate of one specific commodity is inputted in each line.

5        When the giving points management part 213 receives a click of the OK button 403, the giving points management part 213 records the data inputted in the basic point rate input area 401 and the specific point rate input area 402, into the point setting file 237.

10       Here, the screen for specifying specific commodities is not limited to the present example, and may have various forms. For example, the commodity database 235 may be referred to, in order to display a list of commodities on a specific point rate setting screen 410 for receiving  
15       directions.

      In this figure, the specific point rate setting screen 410 has a commodity list area 411 for displaying a list of commodity names, a specific point rate input area 412, a start date input area 413, an expiration date input area  
20       414, and an end of setting button 415.

      The store can input a point rate for a specific commodity into the specific point rate input area 412 in the line corresponding to the commodity name displayed in the commodity list area 411. Further, the start date of the  
25       period in which that point rate is applied can be inputted into the start date input area 413, and the expiration date can be inputted into the expiration date input area 414. Then, the end of setting button 415 is clicked to register

the data.

Namely, when the WWW server 211 receives the click of the end of setting button 415 on this screen, the WWW server 211 records the point rates inputted in the specific point rate input area 412 into the point setting file 237, relating them to respective periods determined by the information inputted in the start date input area 413 and expiration date input area 414, and finishes the screen 410.

Herein above, has been described the processing in which the store apparatus 2 receives setting of points to be given.

Next, will be described processing in which the store apparatus 2 receives access of the customer apparatus 1 and provides the online shop.

Fig. 10 is a flowchart for explaining operation of the store apparatus 2 in that case.

When the WWW server 211 receives access of the customer apparatus 1 through the communication processing part 212, then, the WWW server 211 makes the WWW browser 111 of the customer apparatus 1 browse a Web page.

First, the WWW server 211 presents an authentication screen 500, for example as shown in Fig. 11, to the WWW browser 111, to perform authentication processing (S201). As shown in the figure, this authentication screen 500 has a customer ID input area 501, a password input area 502, an OK button 503, and a new registration button 504. Here, data for generating screens of Web pages is stored in the Web generating data file 238, and the WWW server 211 generates the Web pages

in accordance with prescribed screen transition rules referring to the Web generating data file 238.

5 A customer who has already registered with this online shop, namely a customer who has registered his information such as a customer name, an E-mail address, commodity delivery address, etc. into the customer database 237 can undergo authentication processing by inputting its own customer ID and password into the customer ID input area 501 and the password input area 502 through the input device 16 and by  
10 clicking the OK button 503.

Namely, receiving this information, the WWW server 211 performs the authentication processing referring to the customer database 236 (S201).

15 On the other hand, an unregistered customer can click the new registration button 504 to display a new registration screen (not shown) for performing new registration processing. In the new registration screen, information to be recorded into the customer database 236 is inputted, to register as a customer. Receiving this information, the WWW  
20 server 211 records the information into the customer database 236.

Next, the WWW server 211 presents Web pages showing commodities, to the customer apparatus 1 (S202). The Web pages showing commodities may be of a hierarchical structure,  
25 for example. Fig. 12 is a diagram explaining an example of transition of the Web pages in that case. The WWW server 211 presents a commodity catalog selection screen 510 onto the display unit 17 of the customer apparatus 1 that has

finished the authentication processing. The commodity catalog selection screen 510 has a group of buttons 511 indicating properties of commodities, such as "household electric appliance", "game machine", "software", and the like, for example.

When a click of one of the buttons 511 is received, the WWW server 211 presents a commodity list screen 520 belonging to that property, to receive designation of commodities to purchase (S203).

Fig. 13 is a view showing an example of the commodity list screen 520. This screen may have been prepared in advance and recorded in the Web generating data file 238, or may be dynamically generated for each displaying, referring to commodity data recorded in the commodity database 235. In that case, it is convenient to use a Web page template having a prescribed layout.

In the present figure, the commodity list screen 520 has an area 521 for displaying commodity names, an area 522 for displaying selling prices, an area 523 for displaying commodity images, purchase buttons 524, a purchase procedure button 525, a return button 528, a basic point rate display area 526, and a specific point rate display area 527.

A purchase button 524 is used for designating a corresponding commodity as a commodity to be purchased. Receiving a click of this button 524, the WWW server 211 records a list of commodities to be purchased in a temporary file in the external storage.

The purchase procedure button 525 is a button for



entering purchase procedure with respect to the commodity to be purchased.

The return button 528 is a button for regenerating the commodity catalog selection screen 510.

5        In the specific point rate display area 527, are displayed specific commodities 5271, point rates 5273 and application periods 5272 relating to those commodities.

10        The WWW server 211 refers to the point setting file 237, to display the mentioned information. Further, in the present embodiment, the point setting file 237 records a combination of specific commodities using their commodity IDs. Accordingly, the WWW server 211 refers to the commodity database 235 to extract commodity names corresponding to commodity IDs recorded in the point setting file 237, and  
15        displays those commodity names in the specific point rate display area 527.

20        Further, it is desirable that the WWW server 211 does not display point setting data past its expiration date. Further, point setting data before its start date may not be displayed. However, such data may be displayed as an advance announcement.

      Here, by setting a specific point rate higher than the basic point rate, customers' will to purchase can be excited.

25        Receiving designation of commodities to purchase and a click of the purchase procedure button 525, the WWW server 211 performs calculation processing of points to be given (S204).

The WWW server 211 refers to the temporary file, which records commodities to be purchased, and to the point setting file 237, for searching the group of commodities to be purchased, to confirm if there exist a specific commodity recorded in the point setting file 237, whose period determined by the start date and expiration date includes the date related to its order.

When a specific commodity is extracted, then, specific points to that commodity are calculated as a value obtained by multiplying its selling price by its specific point rate. Of course, a plurality of such specific commodities are included, similar operation is performed for each of them, and the total sum becomes the specific points.

With respect to the other commodities, the total sum of the selling prices is multiplied by the basic point rate to obtain the basic points.

Then, the specific points and the basic points are added to obtain the points to be given.

When the calculation of the points to be given is completed, the WWW server 211 presents a purchase procedure screen 530, for example as shown in Fig. 14, on the display unit 17 of the customer apparatus 1 (S205).

As shown in the figure, the purchase procedure screen 530 includes a list of commodities to be purchased 531, a purchase amount display area 532, a giving points display area 533, a delivery address display area 534, a payment method display area 535, a purchase decision button 536, and a return button 537 for regenerating the commodity list

screen 520.

The WWW server 211 refers to the customer database 236, extracts information on the delivery address and the method of payment registered for each customer in advance, and displays the obtained information in the delivery address display area 534 and the payment method display area 535, respectively. Here, this screen may be used also for receiving alteration of commodities to purchase, alteration of the delivery address, alteration of the method of payment, or the like.

When the WWW server 211 receives a click of the purchase decision button 536, the WWW server 211 adds the number of points displayed in the giving points display area 533 to the number of points 2366 in the customer database. Further, the WWW server 211 adds the information on the purchase date and purchased commodities to the purchase history 2367 in the customer database 236.

Here, although timing of giving the points can be decided arbitrarily, the points may be added to the customer database at the time of the delivery procedure not at the time when the purchase is decided. This is because, an online shop has a feature that an order and delivery of the commodity are not carried out at the same time. If points are given at the time of receiving an order, troublesome adjustment of points is required when order cancel or the like arises in the period between the reception of the order and the delivery of the commodity. In particular, this problem becomes larger in the case of an advance order.

In that case, information that relates a customer ID to the number of given points may be temporarily recorded separately from the number of points 2366 in the customer database 236. Then, at the time of delivery, the temporarily-recorded points can be added to the number of points in the customer database 236 based on that information.

By the above mentioned processing, the processing for providing the online shop in the store apparatus 2 is completed. Based on the information received through a series of processes, the store performs the procedure of delivery of the purchased commodities to the customer. Further, according to the predetermined method of settlement, the settlement processing of the amount of purchase is performed.

The present invention is not limited to the above-mentioned embodiments, and may be variously modified within the gist of the invention.

For example, the number of points given to purchase of a specific combination of commodities may not be proportional to the purchase price, but may be a constant number of points. Or, an additional number of points (bonus points) may be given in addition to the number of points calculated with the basic point rate.

Further, in the above-described embodiments, the apparatus used by the store for setting the points to be given and the apparatus used for setting up the online shop are the same apparatus. However, these apparatuses may be separated. In that case, the apparatus on which the store sets up the online shop may be accessed through Internet,

and a Web page may be used to set points to be given.

As described above, the present invention can excite customers' will to purchase a specific commodity in a specific period.

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